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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ROMANO, JOHN J	
ART UNIT	**PAPER NUMBER**
2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/771,245	RIGHI ET AL.	
	Examiner	Art Unit	
	John J. Romano	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2004 and 26 February 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/23/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims **1-40** are pending in this action.

Information Disclosure Statement

1. The Information Disclosure Statements filed on August 23rd, 2006 has been considered.

Claim Objections

2. Claim 2 is objected to because of the following informalities: On line 2, claim 2 recites "from a manager computer an agent". It is interpreted by the examiner to mean "from a manager computer by an agent". Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims **1-15** and **32** are provisionally rejected on the ground of nonstatutory double patenting over claims **1-12** and **15-17** of copending Application No. 10/770,951. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

In regard to claim **1**, it would be inherent over claim **1** of the cited co-pending application to perform the upgrade "at least one network attached computer" in a network in light of performing the method on "a plurality of computing devices" in a distributed network. It also would have been obvious that a "firmware maintenance procedure" as recited in the co-pending application is a type of "firmware recovery" procedure as recited in the instant application.

In regard to claims **7 and 8**, see claim **7** of the co-pending application.

In regard to claims **2-6, 9-15** and **32**, see claims **2-6, 8-12** and **15-17**, respectively.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim **15** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As defined in the specification a "computer program product may be a computer product may be a *propagated signal*" (see specification, page 4, line 17). A product is a tangible physical article or object, some form of matter, which a signal is not. A signal, a form of energy, does not fall within either of the two definitions of manufacture. Thus a signal does not fall within any of the four statutory classes of 101. See Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Annex IV (c), (signed 26, October, 2005) – OG Cite: 1300 OG 142. Retrieve on <http://www.upsto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>.

Additionally, a program product with recordable medium is not necessary yet to be a computer readable medium and recorded/stored with executable instructions.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims **1-4, 14, 15, 16, 20, 23, 30** and **31** are rejected under 35 U.S.C. 102(e) as being anticipated by Lajoie et al., US 7,093,244 (art of record & hereinafter **Lajoie**).

In regard to claim **1**, **Lajoie** discloses:

- "*A method for updating firmware on a plurality of computing devices over a distributed network...*" (E.g., see Figure 1 & Column 2, lines 65-Column 3, line 4), wherein a method for an upgrade server (manager) upgrading one or more devices is described.
- "*...receiving over the distributed network at the network attached computer, an instruction to begin a firmware recovery procedure...*" (E.g., see Figure 3 & Column 4, lines 20-23), wherein the server initiates the upgrade process by sending out the escape command.
- "*...in response to receiving the instruction, transitioning the network attached computer to a recovery state...*" (E.g., see Figure 3 & Column 4, lines 23-25), wherein upon receipt of the escape message (command) the device 120 breaks out of its normal operation mode and transfers control to the upgrade program 320.
- "*...receiving a new firmware image over the distributed network; and in response to receiving the new firmware image, updating a current firmware within the network attached computer with the new firmware image.*" (E.g., see Figure 6 & Column 4, lines 32-39), wherein firmware may be upgraded from the server commands.

In regard to claim **2**, the rejections of base claim **1** are incorporated.

Furthermore, **Lajoie** discloses:

- "*...in response to transitioning to a recovery state, sending a notification of readiness to update from the network attached computer over the distributed network to the manager computer.*" (E.g., see Figure 2 & Column 8, line 65-Column 9, line 7), wherein the server (manager) upgrades the plurality of client devices simultaneously (parallel) wherein the upgrade program communicates with the server in a lock step upgrade protocol.

In regard to claim **3**, the rejections of base claim **2** are incorporated. Furthermore, **Lajoie** discloses:

- "*...comprises erasing the current firmware and copying the new firmware image to a memory location of the network attached computer.*" (E.g., see Figure 4 & Column 4, lines 31-34), wherein the commands allow for remote erasing, reading and writing to the device 120 being upgraded by the upgrade server.

In regard to claim **4**, the rejections of base claim **2** are incorporated. Furthermore, **Lajoie** discloses:

- "*...rebooting the network attached computer to an operating system independent operating environment.*" (E.g., see Figure 3 & Column 6, lines 31-38), wherein the application program ustes the boot ROM 200 functions to execute from the server 110 on the 8052 micro-controller.

In regard to claims **14** and **15**, see Figure 2, wherein a computer controlled apparatus and readable medium is disclosed.

In regard to claim **16**, **Lajoie** discloses:

- "*...sending a recovery request over the distributed network; in response to sending the recovery request...*" (E.g., see Figure 3 & Column 4, lines 36-39), wherein the device initiates the upgrade.

See claim **1** for the remaining limitations.

In regard to claim **20**, the rejections of base claim **16** are incorporated **Lajoie** discloses:

- "*...sending a recovery request in response to determining that the current firmware is invalid...*" (E.g., see Figure 6).

In regard to claim **23**, see claim **3**.

In regard to claim **30** and **31**, see claim **14** and **15**, respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims **5–8, 17-19, 24-26** and **37-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lajoie** in view of Reuss, US 2003/0165230 (hereinafter **Reuss**) and further in view of Luby et al., US 2002/0129159 (hereinafter **Luby**).

In regard to claim **5**, the rejections of base claim **2** are incorporated. But **Lajoie** does not expressly discloses broadcasting in fragments. However, **Reuss** discloses:

- "*...receiving a broadcast status request prior to updating the current firmware...*" (E.g., see Figure 1 & paragraphs [0102] – [0103]), wherein firmware updates are broadcast prior to the update via UDP or TCP or similar protocol.

Lajoie and **Reuss** are analogous art because they are both concerned with the same field of endeavor, namely, a method for updating or upgrading firmware in a distributed system. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **Reuss's** broadcasting method with **Lajoie's** firmware upgrade method. The motivation to do so would have been to allow easy management of a plurality of devices as taught by **Reuss** (E.g., see page 1, paragraph [0008]).

However, **Lajoie** and **Reuss** do not expressly disclose rebroadcasting missing or corrupted packets. However, **Luby** discloses:

- "*...in response to receiving the broadcast status request, determining whether a rebroadcast of any fragment of the new firmware image is necessary; in response to determining that the rebroadcast of one or more fragments is necessary, sending a request for the rebroadcast of the fragments; and receiving the rebroadcast of fragments in response to sending the request.*" (E.g., see Figure 4 & Column 7, lines 19-41),

wherein missing packets are determined and are rebroadcast based on individual identification.

The combined art of **Lajoie, Reuss** (hereinafter **the combined art**) and **Luby** are analogous art because they are both concerned with the same field of endeavor, namely, a method for serving packets of data. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **Luby's** broadcasting method with **the combined art's** firmware upgrade method. The motivation to do so would have been to allow easy management of a plurality of devices as taught by **Reuss** (E.g., see page 1, paragraph [0008]) to ensure reliability.

In regard to claim **6**, the rejections of base claim **5** are incorporated. Furthermore, **Luby** discloses:

- "*...determining whether the rebroadcast of any fragments of the new firmware image is necessary comprises determining whether any fragments are missing or corrupted.*" (E.g., see Figure 4 & Column 7, lines 19-41), wherein missing packets are rebroadcast based on individual identification.

In regard to claim **7 and 8**, the rejections of base claim **5** are incorporated. Furthermore, **Luby** discloses "*fragments of the firmware image are numbered*" and "*a user datagram protocol/Internet protocol.*" (E.g., see Figure 4 & Column 7, lines 19-41), wherein missing packets are rebroadcast based on individual identification.

In regard to claim **17**, the rejections of base claim **16** are incorporated. Furthermore, **Reuss** discloses:

- "...*sent to a network address of a recovery manager computer storing the new firmware image.*" (E.g., see paragraph [0104]), wherein the device is given a network address to retrieve the firmware update.

In regard to claims **18** and **19, Lajoie** and **Reuss** do not expressly disclose "the network address of the recovery manager computer is stored on the network attached computer" or "located by querying a baseboard management controller operating on the network attached computer. However, one of ordinary skill in the art, at the time the invention was made would have known to store or look-up the network address. Motivation to do so was provided by **Reuss** (e.g., see paragraph [0061], wherein **Reuss** discloses the internet protocol requires a unique network address that may be preset (stored) and static or it can be dynamic, whereupon a central registration server (management controller) assigns the address whenever a new device announces its presence on the network to permit addressing capability flexibility for a call center assest management and control system. Further, **Reuss** discloses the Internet Engineeering Task Force (IEFT) documents the standards that comprise the IP are well known and widely available. Thus, look-up and storing such protocols would have been obvious.

In regard to claim **24**, see claims **5** and **8**.

In regard to claims **25** and **26**, see claims **6** and **7**, respectively.

In regard to claim **37**, **Lajoie** does not expressly discloses the manager computer monitoring a port of the first computer for at least one request. However, it would have been obvious in light of **Lajoie's** disclosure of the device initializing the upgrade and

Reuss' teaching of monitoring a port. Claim 37 is a server version of the previous client (network attached computer) claims. See claims **1, 4** and **16** for the remaining limitations.

In regard to claims **38-40**, these are server version of the client version claims of **4, 5, 12** and **13**.

7. In regard Claims **9, 10** and **32-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lajoie** in view of DeRoo et al., 5,596,713 (hereinafter **Deroo**).

In regard to claim **9**, the rejections of base claim **2** are incorporated. But, **Lajoie** does not expressly disclose "*monitoring a communication port of the network attached computer for the instruction to begin the recovery procedure*". However, **DeRoo** discloses:

- "*monitoring a communication port of the network attached computer for the instruction to begin*" (E.g., see Column 38, lines 25-32), wherein an application monitors a port for an instruction.

Lajoie and **DeRoo** are analogous art because they are both concerned with the same field of endeavor, namely, a method for updating or upgrading firmware in a distributed system. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **DeRoo's** broadcasting method with **Lajoie's** firmware upgrade method. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to "*monitoring a communication port of the network attached computer for the instruction to begin the recovery procedure*".

In regard to claim **10**, the rejections of base claim **9** are incorporated. But, **Lajoie** and **DeRoo** do not expressly disclose "*a recovery OS application...upon only one communication port and utilizes additional processor resources...only upon receiving the instruction*". However, in light of the teaching of an application monitoring a port for an instruction" it would have been obvious to one of ordinary skill in the art to employ a dedicated particular application. The motivation would have been to ensure reliable communication in a timely manner.

In regard to claim **32**, see claims **1, 2, 4** and **9**.

In regard to claim **33**, see claim **12**.

In regard to claim **34**, see claims **5, 6** and **8**.

In regard to claim **35** and **36**, see claims **11** and **13**.

In regard Claims **11-13, 21, 22** and **27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lajoie** in view of Wu et al., 6,732,267 (art of record & hereinafter **Wu**).

In regard to claim **11**, the rejections of base claim **2** are incorporated. But **Lajoie** does not expressly disclose "*...in response to updating the current firmware with the new firmware image, sending a notification of the update to the manager computer.*". However, **Wu** discloses:

- "*...in response to updating the current firmware with the new firmware image, sending a notification of the update to the manager computer.*"

(E.g., see Figure 2 & Column 4, lines 34-55), wherein test of successful BIOS upgrade and corresponding flag setting is disclosed.

Lajoie and **Wu** are analogous art because they are both concerned with the same field of endeavor, namely, a remote method for updating or upgrading firmware in a distributed system. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **Wu's** notification method with **Lajoie's** firmware upgrade method.

In regard to claim **12**, the rejections of base claim **2** are incorporated. Furthermore, **Lajoie** discloses:

- "...*determining whether a current firmware is valid after being updated; and when it is determined that a current firmware is valid then initiating a boot of the network attached computer utilizing the current firmware.*" (E.g., see Figure 2 element 226).

In regard to claim **13**, the rejections of base claim **2** are incorporated. Furthermore, **Lajoie** discloses:

- "...comprises a BIOS of the network attached computer." (E.g., see Figure 2).

In regard to claims **21** and **22**, see claim **12**.

In regard to claims **27** and **28**, see claims **11** and **12**, respectively.

In regard to claim **29**, see claims **4** and **13**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Romano whose telephone number is (571) 272-3872. The examiner can normally be reached on 8-5:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJR

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SUPERVISORY PATENT EXAMINER